

What is claimed is:

1. An audio system for use in a vehicle for the playback of audio data by a sound amplification system of the vehicle, the audio system comprising:
 - (a) a dynamic random access memory (DRAM) that stores the audio data for playback;
 - 5 (b) an audio playback device that reads the audio data from the DRAM and converts it to a form which can be output to the vehicle's sound amplification system;
 - (c) an audio acquisition device that receives the audio data to be stored 10 in the DRAM; and
 - (d) a power supply system between the vehicle's electrical system and the audio system, the power supply system supplying power to the audio system consistently including when the vehicle is not in use.
- 15 2. The audio system of claim 1, wherein said DRAM comprises a synchronous DRAM (SDRAM) and an SDRAM controller having a low-power self-refresh mode whereby the SDRAM may retain its contents but cannot be accessed by the audio playback device.
- 20 3. The audio system of claim 1, wherein the audio playback device comprises an integrated unit including a conventional vehicle radio, a digital audio playback device that records audio data to and reads audio data from said DRAM, and an audio amplifier that amplifies outputs of said vehicle radio and said audio playback device for output to the vehicle's sound amplification system.
- 25 4. The audio system of claim 1, wherein the audio playback device comprises a conventional vehicle audio system including a conventional vehicle radio and an audio amplifier and a physically separate add-on audio playback device that records audio data to and reads audio data from said DRAM and modulates the audio data onto a frequency recognizable by said 30

vehicle radio for amplification by said audio amplifier and output to the vehicle's sound amplification system.

5. The audio system of claim 1, wherein said audio acquisition device comprises a radio receiver/demodulator that receives broadcast analog audio signals, converts the received audio signals into digital audio signals, and encodes the digital audio signals for storage in said DRAM.
10. The audio system of claim 1, wherein said audio acquisition device comprises a radio receiver that receives broadcast digital signals and stores the received broadcast digital signals in said DRAM.
15. The audio system of claim 1, wherein said audio acquisition device comprises a radio receiver that receives digital data transmitted wirelessly to said audio system from a nearby computer or media server and stores the received digital data in the DRAM.
20. The audio system of claim 1, wherein said audio acquisition device comprises a Compact Disc (CD) drive that reads audio data from an audio CD and stores the audio data in said DRAM.
25. The audio system of claim 1, wherein said power supply system includes a power supply switch and a low-voltage monitor that detects a power output of the vehicle's electrical system and controls said power supply switch to selectively minimize or remove power to said audio system to prevent excessive drain on the vehicle's electrical system.

10. An audio system for use in a vehicle for the playback of audio data by a sound amplification system of the vehicle, the audio system comprising:

- (a) a nonvolatile digital storage device that stores the audio data for playback;
30. (b) an audio playback device that reads the audio data from the digital storage device and converts it to a form which can be output to the vehicle's sound amplification system;

(c) a first audio acquisition device that receives the audio data to be stored in the digital storage device, said first audio acquisition device including a radio receiver/demodulator that receives broadcast audio signals and stores the received audio signals in said digital storage device; and

5 (d) a second audio acquisition device comprises a radio receiver that receives audio data transmitted wirelessly to said audio system from a nearby computer or media server and stores the received audio data in the digital storage device.

10 11. The audio system of claim 10, wherein said digital storage device comprises a synchronous DRAM (SDRAM) and an SDRAM controller having a low-power self-refresh mode whereby the SDRAM may retain its contents but cannot be accessed by the audio playback device.

15 12. The audio system of claim 10, wherein the audio playback device comprises an integrated unit including a conventional vehicle radio, a digital audio playback device that reads said audio data from said digital storage device, and an audio amplifier that amplifies outputs of said vehicle radio and said audio playback device for output to the vehicle's sound amplification system.

20 13. The audio system of claim 10, wherein the audio playback device comprises a conventional vehicle audio system including a conventional vehicle radio and an audio amplifier and a physically separate add-on audio playback device that reads said audio data from said digital storage device and modulates the audio data onto a frequency recognizable by said vehicle radio for amplification by said audio amplifier and output to the vehicle's sound amplification system.

25 30 14. The audio system of claim 10, wherein said first audio acquisition device comprises a radio receiver that receives broadcast digital signals from a wireless Internet connection and stores the received broadcast digital signals in said digital storage device.

15. The audio system of claim 10, wherein said first audio acquisition device comprises a radio receiver that receives broadcast analog audio signals from a radio broadcast station, converts the received audio signals into digital audio signals, and encodes the digital audio signals for storage in said digital storage device.

16. The audio system of claim 10, wherein said second audio acquisition device comprises an IEEE 802.11 wireless receiver.

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17. The audio system of claim 10, wherein said computer or media server stores a library of digital audio and includes a software interface that permits a user to select audio selections from said library for transmission to said audio system for storage in said digital storage device at predetermined times or at predetermined time intervals.

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18. The audio system of claim 17, wherein said software interface permits a user to remotely select audio data for recording by said first audio acquisition device.

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19. The audio system of claim 10, further comprising a power supply system between the vehicle's electrical system and the audio system, the power supply system supplying power to the audio system consistently including when the vehicle is not in use.

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20. The audio system of claim 19, wherein said power supply system includes a power supply switch and a low-voltage monitor that detects a power output of the vehicle's electrical system and controls said power supply switch to selectively minimize or remove power to said audio system to prevent excessive drain on the vehicle's electrical system.

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21. A method for providing audio playback of pre-recorded audio content in a vehicle over the vehicle's sound amplification system, comprising:

(a) a user selecting specific audio content that the user wants to listen to in the vehicle;

(b) establishing a wireless networking connection between an audio device that is mounted in the vehicle and a remote source of the specific audio content;

5 (c) transferring a copy of the specific audio content over the wireless connection from the remote source to the audio device;

(d) the audio device receiving the specific audio content and storing it in non-volatile memory; and.

10 (e) the user interacting with the audio device to cause it to play back said specific audio content.

22. The method of claim 21, comprising the additional steps of the user selecting and downloading audio content to said audio device from a library 15 of digital audio at a predetermined time or at a predetermined time interval.

23. The method of claim 22, wherein said downloading step comprises the step of transmitting digital audio from a computer containing said library of digital audio to said audio device in a vehicle via a wireless short-range 20 radio connection.

24. An audio system for use in a vehicle for the playback of audio data by a sound amplification system of the vehicle, the audio system comprising:
a non-volatile digital storage device that stores the audio data for
playback;
an audio playback device that reads the audio data from the digital storage device and converts it to a form which can be output to the vehicle's sound amplification system;
a first audio acquisition device that receives the audio data to be stored
30 in the digital storage device, said first audio acquisition device including a radio receiver/demodulator that receives broadcast audio signals and stores the received audio signals in said digital storage device; and
a second audio acquisition device comprising a Compact Disc (CD) reader.

25. An audio system for use in a vehicle for the playback of audio data by a sound amplification system of the vehicle, the audio system comprising:

- 5 a non-volatile digital storage device that stores the audio data for playback;
- an audio playback device that reads the audio data from the digital storage device and converts it to a form which can be output to the vehicle's sound amplification system;
- a first audio acquisition device comprising a Compact Disc (CD) reader; and
- 10 a second audio acquisition device comprising a radio receiver that receives audio data transmitted wirelessly to said audio system from a nearby computer or media server and stores the received audio data in the digital storage device.

15 26. An audio system for the playback of audio data by a sound amplification system, comprising:

- (a) a dynamic random access memory (DRAM) that stores the audio data for playback;
- 20 (b) an audio playback device that reads the audio data from the DRAM and converts it to a form which can be output to the sound amplification system;
- (c) an audio acquisition device that receives the audio data to be stored in the DRAM; and
- 25 (d) a power supply system supplying power to the DRAM consistently including when power is removed from the rest of the audio system.

30 27. The audio system of claim 26, wherein said audio acquisition device comprises a radio receiver that receives digital data transmitted wirelessly to said audio system from a nearby computer or media server and stores the received digital data in the DRAM.

28. The audio system of claim 27, wherein said computer or media server stores a library of digital audio and includes a software interface that

permits a user to select audio selections from said library for transmission to said audio system for storage in said DRAM at predetermined times or at predetermined time intervals.

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